day 2. In 58 pts without known prior hyperlipidemia, 59% were tested during admission (vs. 53%, p = NS); and 17% (vs. 17%, p = NS) had fasting panels by hospital day 2. Of tested pts who met criteria for treatment (n = 34), 35% received therapy at discharge. *Conclusion:* An intensive physician education program can significantly improve compliance with current guidelines for lipid testing but therapy remains suboptimal.

922 Hypertension: Clinical Issues

Sunday, March 16, 1997, 5:00 p.m.–7:00 p.m.
Anaheim Convention Center, Hall E
Presentation Hour: 5:00 p.m.–7:00 p.m.

SUNDAY POSTER

922-149 Lunchables® Increase Blood Pressure in Dahl Rats

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Human populations ingesting more than 80 mM Na/day (1 mM Na/kg body wt) demonstrate an increase in blood pressure (BP) with age resulting in premature death and disability. Lunchables® (L), a snack marketed to children, contains 1780 mg sodium (77.4 mM Na) which is 2.2 mM Na/kg for a 35 kg child. The cumulative effects of L on BP in Dahl Salt Sensitive (S) Rats were tested by feeding *ad libitum* ground up food for 22 days beginning at 12 weeks of age to Dahl S rats initially raised on a 0.4% Na diet. Rats were separated into 3 diet groups (4 rats each). Low (0.4% Na): composed of low Na rat chow, Medium (0.75% Na): a ground up diet of items purchased to simulate a lower Na L, and High (1.5% Na): a ground up diet composed of L. After 22 days intraarterial BP was measured in conscious rats over 3 days. Data were analyzed (table) by repeated measures analysis of variance: *p < 0.05 vs Low Na.

Diet Na	MAP (mm Hg)	Heart Wt (gm)	Kidney Wt (gm)
Low	133 ± 4.2	1.20 ± 0.03	2.68 ± 0.10
Medium	146 ± 4.6*	1.35 ± 0.05*	2.92 ± 0.10
High	159 ± 3.8*	1.41 ± 0.02*	3.36 ± 0.19*

The children's snack, L, and even a diet with 50% less Na, increased blood pressure, and induced cardiac and renal hypertrophy in this salt sensitive genotype. A Na induced increase in BP in any salt sensitive phenotype will result in detrimental effects including cardiac hypertrophy and renal damage. Children and adults from salt sensitive families and ethnic groups, should avoid these and other high Na snacks. Warnings of the toxic effects of sodium in many people should be placed on these dangerous snacks.

922-150 Does Gender Influence Diuretic Induced Lipid Changes?

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The purpose of the study was to assess the effect of diuretic therapy on lipid changes in male and female patients with hypertension. Several studies have shown mild and transient increase in LDL-cholesterol and triglycerides (Trig) with diuretic therapy but mostly in hypertensive men. Data in female hypertensives is scarce. In this study 61 males (age = 55 ± 13 years) and 24 females (age = 59 ± 8 years) with essential hypertension were treated with hydrochlorothiazide (HCTZ; average dose 42.5 mg daily). Both groups were followed for 6 months (m) with comparable diastolic BP reduction. Lipid changes within groups from baseline to 3 m and 6 m, in mg/dL, were as follows:

	Males				Females			
	3m	p	6m	p	3m	p	6m	p
Chol	10 ± 21	0.002	6 ± 25	0.18	18 ± 27	0.02	19 ± 20	0.002
LDL	4 ± 19	0.2	1 ± 24	0.87	17 ± 27	0.01	21 ± 21	0.002
Trig	35 ± 69	0.001	27 ± 108	0.13	14 ± 69	0.40	5 ± 49	0.73
HDL	0.3 ± 9	0.82	0.2 ± 7	0.86	−1 ± 8	0.50	−3 ± 7	0.18

p = p value

Unlike males, in hypertensive females, LDL-cholesterol and total cholesterol levels were sustained higher than baseline after 6 months of HCTZ but triglycerides did not rise significantly at 3 or 6 months. In males triglycerides and total cholesterol rose significantly at 3 months but decreased at 6 months. HDL-cholesterol levels did not change in either group.

Conclusion: Lipid changes with diuretic therapy are more pronounced and longer lasting in hypertensive women as compared to hypertensive men.

922-151 Alterations of Left Ventricular Geometry and Function in Subjects with White Coat Hypertension

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The prevalence of white coat hypertension (WCHT) in the general population and its relationship to left ventricular hypertrophy (LVH) and alterations of LV function is still unclear. To investigate this issue, we studied 1677 subjects of a population based cohort (WHO MONICA-Projekt, Augsburg). Blood pressure readings were performed in a sitting position according to a standardized protocol both during a 60 minutes period of relaxed conversation and filling out questionaires (BP-T, mean of second and third measurement by a technician) and after echocardiography (BP-MD, by a physician). Subjects were characterized as normotensive (NT; BP-T and BP-MD < 140/90 mmHg, n = 849), mildly hypertensive (MHT; BP-T > 140/90 and BP-MD < 160/95 mmHg, n = 129), white coat hypertensive (WCHT; BP-T < 140/90, BP-MD > 160/95 mmHg, n = 160), and hypertensive (HTN; antihypertensive medication or BP-T > 140/90 and BP-MD > 160/95 mmHg, n = 538). WCHT were younger (51 years) than MHT and HTN (55 and 61 years), however more obese (28 kg/m2) than NT and MHT (25 and 26.5 kg/m2; p < 0.05 each). Systolic meridional wallstress as well as the prevalence of LVH (Penn mass; g/m) were markedly increased in WCHT (75 dynes/cm^2; LVH 32%) and HTN (76 dynes/cm^2; LVH 57%) compared to NT (68 dynes/cm^2; LVH 12%) and MHT (71 dynes/cm^2; LVH 19%), p < 0.05 each. Systolic function was normal, however, Doppler diastolic filling parameters were markedly altered in WCHT, MHT, and HTN (IntE/A 1.9, 1.7, and 1.4; IVRT 79, 80, and 89 ms) compared to NT (IntE/A 2.3, IVRT 74 ms, p < 0.05). Finally, multivariate analysis revealed that WCHT was a predictor of increased LV mass independent of body mass index, sex, and age. However, an independent impact of WCHT on diastolic filling was not detected. Thus, in the general population a large group of subjects with normal blood pressure is at increased risk for LVH due to exaggerated blood pressure response to mild stress.

922-152 The Relative Value of Pharmacological Stress Echo and Exercise Stress Testing for Risk Stratification in Hypertensives

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To assess the relative prognostic value of dipyridamole-atropine stress echo (DASE) (0.84 mg/kg over 10′ + atropine up to 1 mg during 2-D echo and 12-lead ECG monitoring) and bicycle exercise electrocardiography testing (EET) (incremental workloads of 25 W every 2′) in hypertension, the two tests were performed in 169 hypertensive patients (pts) (age 61 ± 8 years; mean ± SD) with known or suspected coronary artery disease. No patient had a left bundle branch block at baseline ECG, was taking digitalis or antiarrhythmic medications. The only criterion for DASE positivity was the appearance of new functional abnormalities during test. ECG criterion of positivity during EET was an ST-segment shift ≥0.1 mV from baseline 80 msec after the J point in at least two contiguous leads. DASE was positive in 46 pts. EET was positive in 61 pts, 29 of whom had also a DASE positivity. During the follow-up (31 ± 18 months) 36 cardiac events occurred: 3 deaths, 4 nonfatal infarctions, 10 unstable angina and 19 coronary revascularizations. The positive predictive value was higher for DASE compared with EET (54 vs. 35%; p ≤ 0.05). It rose to 69% in pts having both DASE and EET positivity. The negative predictive value was 91% for DASE and 87% for EET (p = NS).

Pharmacological stress echo is more efficient than exercise electrocardiography testing for diagnostic purposes in hypertensives, but to date their relative prognostic values remain unknown. Our results show that DASE is more efficient than EET in risk stratification of hypertensives. However, a simple negative EET is sufficient to identify a very low risk subset in whom additional testing may not be warranted.

922-153 Inadequate High Blood Pressure Awareness and Control Using National Treatment Guidelines in a Population With Multiple Risk Factors

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The NIH National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (JNC IV and V) Guidelines have been widely disseminated to physicians since 1988, supplemented with public education via the National High Blood Pressure Education Program. To determine the extent to which these guidelines were implemented in a high risk population of families with premature CHD, we examined the prevalence of hypertension (HTN) and